

MISSOURI DEPARTMENT OF TRANSPORTATION JOB OPPORTUNITY ANNOUNCEMENT

Date Posted: 02/13/2020
Application Deadline: Open Until Filled
Job Post ID: 12530
Job Title: Highway Designer / Intermediate Highway Designer / Senior Highway Designer
Min Monthly Salary: \$3,486.00 / \$3,875.00 / \$4,335.00
Number Positions: 1
Location: 601 W. Main, Jefferson City, MO
District/Division: Central Office / Design Division
Human Resources Contact Number: 573-751-2923

Notice: This position is located in the CADD Services Unit of MoDOT's Design Division.

Remote work location and/or teleworking is not available for this position.

General Summary:

--- Highway Designer ---

The highway designer is responsible for the determination of highway design features and performs computations for preparation of detailed construction plans for a portion of, or a complete, highway project. Responsibilities are performed under moderate supervision.

--- Intermediate Highway Designer ---

The intermediate highway designer prepares detailed highway construction plans for a portion or complete highway project. Responsibilities are performed under moderate supervision.

--- Senior Highway Designer ---

The senior highway designer prepares highway design projects and coordinates the work of highway design technicians engaged in such projects. Responsibilities are performed under general supervision.

Minimum/Required Qualifications:

--- Highway Designer ---

Bachelor's Degree: Civil Engineering

--- Intermediate Highway Designer ---

Bachelor's Degree: Civil Engineering

Two years of experience in highway or transportation engineering.

--- Senior Highway Designer ---

Bachelor's Degree: Civil Engineering

Four years of experience in highway or transportation engineering.

Supervisory Responsibilities:

--- Highway Designer ---

Lead Worker Only

--- Intermediate Highway Designer ---

Lead Worker Only

--- Senior Highway Designer ---

Special Working Conditions/Job Characteristics:

--- Highway Designer ---

Job may require occasional, statewide, overnight travel.

--- Intermediate Highway Designer ---

Job may require occasional, statewide, overnight travel.

--- Senior Highway Designer ---

Job may require occasional, statewide, overnight travel.

Examples of Work:

--- Highway Designer ---

- Designs projects, including but not limited to, bridge replacements and resurfacing utilizing engineering software; prepares reconnaissance and conceptual reports and other project correspondence, including but not limited to, environmental impact statements.
- Determines highway design features including geometrics, standards for highway functional classification, profile grades, typical sections, earthwork quantities, signals, signing and lighting, construction staging, traffic control, drainage, construction limits, exceptions to design standards, and safety improvements; uses computer aided drafting and design (CADD) system and other engineering software for computations and plan preparation.
- Assists in the development and review of detailed preliminary plans, right of way plans, and final plans for complex projects, including but not limited to, interchanges, urban, or major bridge projects; ensures plans are in accordance with current design standards, policies, specifications and practices.
- Computes quantities from standards and estimates costs for projects in all stages (preliminary to final) for the purpose of developing both short-term and long-term plans for construction.
- In conjunction with a Professional Land Surveyor, obtains and plots land and property lines on plans for survey notes and abstracts; computes areas; ties right of way points to centerlines; determines size and location easements.
- Addresses public concerns directly and/or indirectly, including, but not limited to, written correspondence, telephone, e-mail, public hearings and personal meetings.
- Determines highway design features such as highway grades, typical roadway sections, earthwork quantities, elevations, profiles, horizontal and vertical alignment, bridges, and functional classes in accordance to design standards.
- Designs, codes, develops, supports, and configures engineering software applications to be used by the department's engineers and designers.
- Develops material for end users on department's engineering software applications and assists end users with software problems/issues.
- Performs lead worker responsibilities, which may include providing general instruction, assigning and reviewing work, coaching and training, providing guidance and instruction in the proper and most efficient methods of accomplishing tasks, and providing input to the direct supervisor on staffing decisions and performance management.
- Performs other responsibilities as required or assigned.

--- Intermediate Highway Designer ---

- Establishes horizontal and vertical alignment, balances earthwork, hydrologic and hydraulic designs using engineering principles; makes design notes, sketches, and layouts for detailing personnel.
- Determines highway design features including geometrics, standards for highway functional classification, profile grades, typical sections, earthwork quantities, signals, signing and lighting, construction staging, traffic control, drainage, construction limits, exceptions to design standards, and safety improvements; uses computer aided drafting and design (CADD) system and other engineering software for computations and plan preparation.
- In conjunction with a Professional Land Surveyor prepares bridge surveys to determine approximate bridge length, location, and type of structure; determines the location, type, and size of drainage structures and erosion control measures.
- In conjunction with a Professional Land Surveyor determines right of way to be acquired; computes areas; locates land and property lines; determines size and locations of easements.
- Determines items and prices to be used for tabulation of quantities, summaries, and estimates; prepares preliminary

to final plan cost estimates for projects.

- Reviews plans for conformance with standards and policy; reviews plans for errors or omissions; writes special provisions.
- Addresses public concerns directly and/or indirectly, including, but not limited to, written correspondence, telephone, e-mail, public hearings and personal meetings.
- Prepares relocation plans for utility adjustments; prepares highway capacity studies, and warrants and plans for traffic signals and highway lighting.
- Designs, codes, develops, supports, and configures engineering software applications to be used by the department's engineers and designers.
- Develops and trains material for end users on department's engineering software applications and assists end users with software problem/issues.
- Performs lead worker responsibilities, which may include providing general instruction, assigning and reviewing work, coaching and training, providing guidance and instruction in the proper and most efficient methods of accomplishing tasks, and providing input to the direct supervisor on staffing decisions and performance management.
- Performs other responsibilities as required or assigned.

--- Senior Highway Designer ---

- Establishes horizontal and vertical alignment, balances earthwork, hydrologic and hydraulic designs using engineering principles; makes design notes, sketches, and layouts for detailing personnel; directs and/or completes the preparation of plan and profile sheets; determines mapping corridors for aerial photography.
- Determines highway design features including geometrics, standards for highway functional classification, profile grades, typical sections, earthwork quantities, signals, signing and lighting, construction staging, traffic control, drainage, construction limits, exceptions to design standards, and safety improvements; uses computer aided drafting and design (CADD) system and other engineering software for computations and plan preparation.
- Prepares cost estimates for use in accurately scoping projects for the Statewide Transportation Improvement Program; determines items and prices to be used for tabulation of quantities, summaries, and estimates; prepares preliminary cost estimates for projects.
- Prepares displays and exhibits to present to the public and participates in public hearings and meetings to obtain public input and answer questions; meets with landowners to discuss right of way acquisition and design options; meets with groups with special interests in transportation.
- Prepares conceptual report, detailed preliminary, right of way, and final plans for an assigned project.
- Prepares contract plan documentation including job special provisions, estimate, workday study, and related contract documents.
- In conjunction with a Professional Land Surveyor prepares bridge surveys to determine approximate bridge length, location, and type of structure; determines the location, type, and size of drainage structures and erosion control measures.
- Reviews in-house, consultant, and permit plans for conformance with standards and policy; reviews plans for error or omissions.
- Participates in quality circle and core teams involving other divisions.
- Designs, codes, develops, supports, and configures engineering software applications to be used by the department's engineers and designers.
- Develops and trains material for end users on department's engineering software applications and assists end users with software problem/issues.
- Performs lead worker responsibilities, which may include providing general instruction, assigning and reviewing work, coaching and training, providing guidance and instruction in the proper and most efficient methods of accomplishing tasks, and providing input to the direct supervisor on staffing decisions and performance management.
- Performs other responsibilities as required or assigned.

In order to be considered for this vacancy please go to the Missouri Department of Transportation [Employment Application System \(EAS\)](#) and submit an on-line application. Applications, and if applicable transcripts, must be received by no later than 11:55 pm of the closing date listed on the advertised vacancy.

MoDOT is primarily conducting telephone interviews due to social distancing requirements at this time. For applicants being interviewed who are hearing or speech impaired and need assistance, we will coordinate with the Missouri Relay System.

Equal Employment Opportunity / Affirmative Action Employer, M/F/D/V

MoDOT does not hire individuals with F-1 OPT visas into full-time or permanent part-time positions and MoDOT does not sponsor applicants for work visas.